

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant :	Stephen Rawle	Art Unit :	3724
Serial No. :	10/798,112	Examiner :	Hwei-Siu Payer
Filed :	March 11, 2004	Conf. No. :	5924
Title :	SHAVING RAZORS WITH MULTIPLE BLADES		

Mail Stop Appeal Brief - Patents

Commissioner for Patents

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BRIEF ON APPEAL

Appellants are appealing the rejection of claims 1-8 and 11-20 in the office action mailed January 18, 2007. Appellants request that the rejections be reversed.

(1) Real Party in Interest

The real party in interest is The Gillette Company, Prudential Tower Building, Boston, Massachusetts. The Gillette Company recently was acquired by The Procter & Gamble Company.

(2) Related Appeals and Interferences

There are no related appeals or interferences.

(3) Status of Claims

Claims 1-8 and 11-20 are pending. Claims 9 and 10 have been canceled.

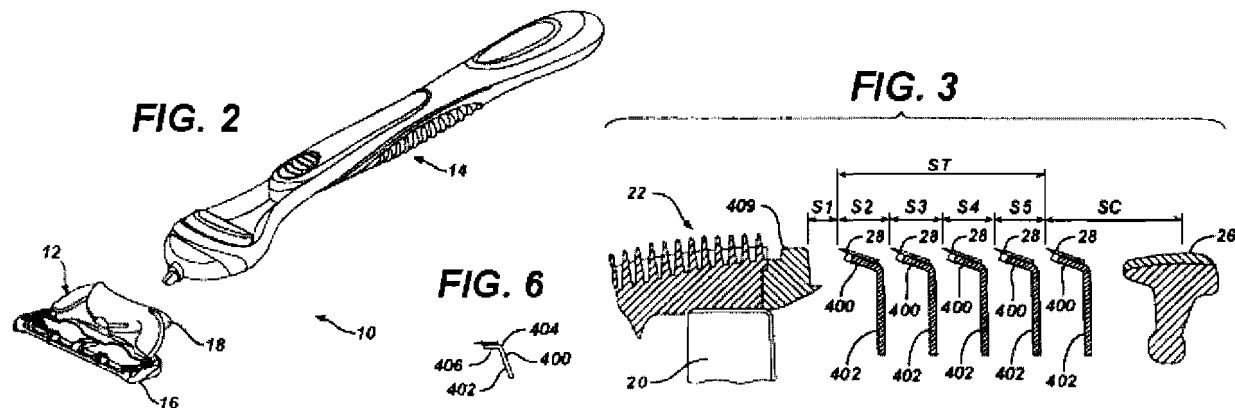
Claims 1-8 and 11-20 stand rejected and are being appealed herein. Claims 1-5, 7,8 and 11-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gilder et al., U.S. Patent Application Publication No. 2002/0144404 ("Gilder '404") in view of Gilder et al., U.S. Patent No. 6,212,777 ("Gilder '777") and Gooding, U.S. Patent No. 4,200,976 ("Gooding"). Claim 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Gilder '404 in view of Gilder '777 and Gooding in further view of Trotta, U.S. Patent No. 4,407,067 ("Trotta").

(4) Status of Amendments

All amendments have been entered.

(5) Summary of Claimed Subject Matter

The claims relate to shaving razor blade units, such as those shown in Figs. 2 and 3, reproduced below. Fig. 2 depicts a shaving razor blade cartridge 12 and a handle 14. Fig. 3 depicts a vertical sectional view showing the relative positions of some of the components of a cartridge. Fig. 6 depicts a vertical sectional view of a cutting member.



Independent claim 1 is directed towards a shaving razor blade unit (see e.g., 12) including a housing (see e.g., 20), a group of at least five parallel blades (see e.g., 28) supported by the housing, the distance (see e.g., Fig. 3, ST) from the cutting edge of a first blade of the group to the last blade of the group being between 3.8 mm and 4.6 mm (see e.g., specification, page 4, line 3). The blades (see e.g., 28) are each mounted on respective support members (see e.g., 400) that are each movably mounted on said housing (see e.g., 20), each of said support members (see e.g., 400) having a blade platform portion (see e.g., 406) for supporting the respective blade (see e.g., 28) and a depending base portion (see e.g., 402) angled relative to the blade platform portion (see e.g., 406). The depending base portions (see e.g., 402) being arranged generally perpendicular to an imaginary shaving surface approximately intersecting the blade cutting edges (see e.g., Fig. 3). The blades (see e.g., 28) have a blade length extending rearward from the cutting edge (see e.g., Fig. 3) and the blade length is less than 1 mm (see e.g., specification, page 4, line 11).

Dependent claims 2-8, 12, 13, and 16 are dependent on independent claim 1. Claims 2 and 3 further require the distance (see e.g., Fig. 3, ST) from the cutting edge of a first blade of the group to the last blade of the group be between 4.0 mm and 4.4 mm (see e.g., specification, page 4, line 4) and between 4.1 mm and 4.3 mm (see e.g., specification, page 4, lines 4-5) respectfully. Claim 6 further requires the blades to have a blade tangent angle between 21° and 22° (see e.g., specification, page 2, lines 1-2). Claims 12 and 13 further require a blade length of less than 0.9 mm (see e.g., specification, page 4, line 12) or of about 0.85 mm (see e.g., specification, page 4, line 12) respectfully. Claim 16 requires the depending base portion (see e.g., 402) to extend rearward of a blade end (see e.g., Fig. 7, 450; Fig. 3).

Independent claim 11 is directed towards a shaving razor blade unit (see e.g., 12) including a housing (see e.g., 20), a group of at least five parallel blades (see e.g., 28) supported by the housing, the blades having an average interblade span between 0.95 mm and 1.15mm (see e.g., specification, page 3, lines 27-29). The blades (see e.g., 28) are each mounted on respective support members (see e.g., 400) that are each movably mounted on the housing (see e.g., 28), each of the support members (see e.g., 400) having a blade platform portion (see e.g., 406) for supporting the respective blade (see e.g., 28) and a depending base portion (see e.g., 402) angled relative to the blade platform portion (see e.g., 406). The depending base portions (402) is arranged generally perpendicular to an imaginary shaving surface approximately intersecting the blade cutting edges (see e.g., Fig. 3). The blades (see e.g., 28) have a blade length extending rearward from the cutting edge (see e.g., Fig. 3) and the blade length is less than 1 mm (see e.g., specification, page 4, line 11).

Claims 14, 15, and 17 are dependent on independent claim 11. Claims 14 and 15 further require a blade length of less than 0.9 mm (see e.g., specification, page 4, line 12) or of about 0.85 mm (see e.g., specification, page 4, line 12) respectfully. Claim 17 requires the depending base portion (see e.g., 402) to extend rearward of a blade end (see e.g., Fig. 7, 450; Fig. 3).

Claims 18-20 are multiply dependent on claims 1 and 11. Claims 18-20 further require the thickness (see e.g., T) of each the support member (see e.g., 400) to be between 0.004 inch (0.10 mm) and 0.009 inch (0.23 mm), between 0.005 inch (0.13 mm) and 0.007 inch (0.18 mm), and about 0.006 inch (0.15 mm,) respectfully (see e.g., specification, page 4, lines 15-17).

(6) Grounds of Rejection to be Reviewed on Appeal

Claims 1-5, 7, 8 and 11-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Gilder '404 in view of Gilder '777 and Gooding. Claim 6 is rejected under 35 U.S.C. §103(a) as being unpatentable over Gilder '404 in view of Gilder '777 and Gooding, and further in view of Trotta. Appellants request reversal of all rejections under 35 U.S.C. § 103(a).

(7) Argument

This argument section will specifically address each rejection and each claim, pointing out how the rejection of each claim is improper.

A. The rejection of claims 1-5, 7, 8 and 11-20 under 35 U.S.C. §103(a) over Gilder '404 in view of Gilder '777 and Gooding is improper.

Gilder '404 discloses a safety razor blade. (See e.g., Gilder '404, abstract). As shown in Figs. 5 and 8, reproduced below, the safety razor blade has either 3 or 4 parallel cutting edges (19, 20, 21, and 22) mounted in a frame (10) between guard and cap surfaces. (See e.g., Gilder '404, figs. 5 – 8 and abstract). The safety razor blade is configured such that the “average inter-blade span [is between] 1.05 [and] 1.15 mm, more precisely about 1.10 mm.” (See e.g., Gilder '404, page 3, paragraph 0013).

The safety razor blade is also configured to have a wash through index of more than 0.20, “more especially above 0.30.” (See e.g., Gilder '404, abstract, page 3, paragraph 0013). A substantial portion of the disclosure of Gilder '404 is directed towards the importance of the wash through index and how to obtain wash through indexes sufficient to allow for good inter-blade rinsability. (See e.g., Gilder '404, page 2, eq. 1 and paragraphs 0009 – 0011). In order to

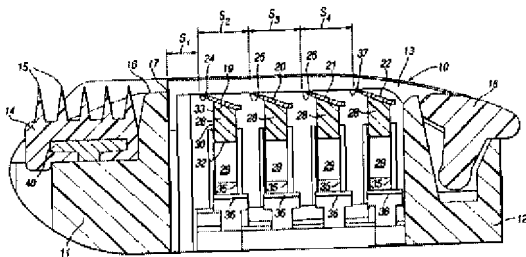


Fig.8

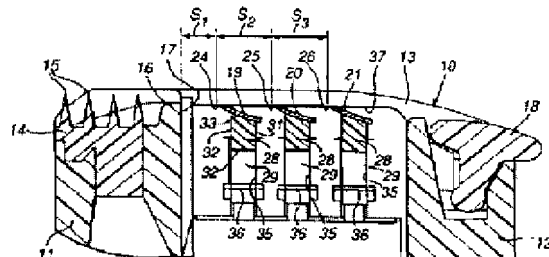


Fig 5

obtain a suitable wash through index, Gilder '404 teaches "that the support bars 28 are narrower than the blades they support and *are confined within the width of the blades, this being an important contribution to achieving a wash through index value of at least 0.20 in accordance with the essential teaching of the present invention.*" (Gilder '404, page 3, paragraph 0025 (emphasis added)).

The rejection of claims 1-5, 7, 8 and 11-20 under 35 U.S.C. § 103(a) based on the combination of Gilder '404, Gilder '777, and Gooding should be reversed. The rejection is a classic improper hindsight reconstruction of the claimed invention from the prior art.

35 U.S.C. § 103(a) provides in relevant part:

(a) A patent may not be obtained... if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

In order to find a claim obvious under 35 U.S.C. § 103(a), there must be a suggestion in the prior art to combine or modify the prior art to obtain the subject matter covered by the claim.

The Federal Circuit has cautioned repeatedly that obviousness cannot derive from a hindsight reconstruction of the claimed invention that uses the claim as a roadmap. For example, in In re Fritch, 972 F.2d 1260, 1266 (Fed. Cir. 1992), the Court cautioned:

[I]t is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious....

Similarly, in W.L. Gore and Associates v. Garlock, Inc., 721 F.2d 1540, 1553 (Fed. Cir. 1983) the Court explained:

To imbue one of ordinary skill in the art with knowledge of the invention when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

Neither Gilder '404, Gilder '777, nor Gooding, alone or in combination, would have suggested to a person of ordinary skill in the art to modify the safety razor blade unit disclosed by Gilder '404 in the way advanced by the Office Action mailed 1/18/2007. Moreover,

Appellants submit that the prior art, taken as a whole, would have taught away from the combination of references proposed by the Examiner.

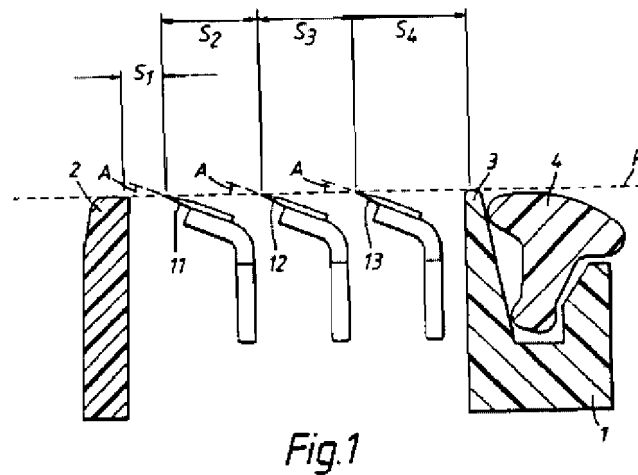
Independent Claim 1

With respect to claim 1, Gilder '404 fails to disclose (1) "support members (400) . . . having . . . a depending base portion (402) angled relative to [a] blade platform portion (406)," (2) a "blade length (LB) [of] less than 1 mm," (3) "a group of at least five parallel blades," and (4) a "distance from the cutting edge of a first blade of said group to a last blade of said group being between 3.8 mm and 4.6 mm." Thus, Gilder '404 is lacking at least four distinct elements of Appellants' claim.

The secondary references -- Gilder '777 and Gooding -- would not have led one having ordinary skill in the art at the time of invention to modify the device disclosed by Gilder '404 to have these claimed features. Each one of these deficiencies in Gilder '404 will be addressed below, in turn, with an explanation of how the Office Action mailed 1/18/2007 failed to present a *prime facie* case of obviousness.

There is no disclosure in Gilder '404 of a "support members (400) . . . having . . . a depending base portion (402) angled relative to [a] blade platform portion (406)" Gilder '404 instead discloses support bars 28 as shown in Figs. 5 and 8, reproduced above. These support bars 28 do not include depending base portions angled relative to blade platform portions. The "support bars 28 are narrower than the blades they support *and are confined within the width of the blades.*" (Gilder '404, page 3, paragraph 0025 (emphasis added)).

The Office Action mailed 1/18/2007 concedes that "the blades of Gilder et al. '404 are each mounted on a support member (28) which is not of the claimed angled shape." (See Office Action mailed 1/18/2007, page 3). In an attempt to construct an obviousness type rejection, using hindsight, the Examiner relies on Gilder '777, asserting that "[i]t would have been obvious for one having ordinary skill in the art to further modify Gilder et al. '404 by having each blade supported on a well-known angled shape blade support member such as that of '777's." Appellants disagree. The blade support members of Gilder '777 are shown in Fig. 1 of Gilder '777, reproduced below.



As can be seen in Fig. 1, the blade support members of Gilder '777 are clearly not confined within the width of the blades.

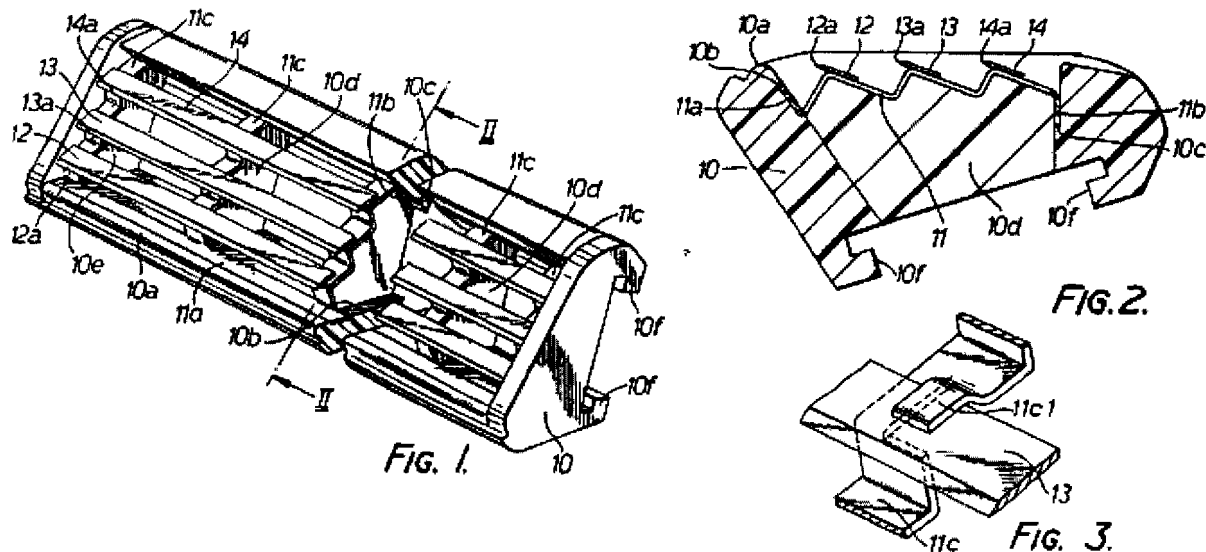
As discussed above, Gilder '404 emphasizes that having blade support members (support bars) confined within the width of the blades is "an important contribution to achieving a wash through index value of at least 0.20." (Gilder '404, page 3, paragraph 0025). Gilder '404 stresses that this is "in accordance with the *essential teaching* of the present invention." (Gilder '404, page 3, paragraph 0025 (emphasis added)).

Accordingly, one having ordinary skill in the art at the time of invention would not have substituted the blade support member of Gilder '777 for the blade support members (28) of Gilder '404 *because doing so would contradict the explicit directions of Gilder '404*, defeating Gilder's express purpose of having the blade support members confined within the width of the blades in order to achieve a sufficient wash through index. (See Reply to the Office Action mailed November 25, 2005 filed April 27, 2006, page 8). Furthermore, it is noted that both Gilder '404 and Gilder '777 share the same first named inventor and that Gilder '404 has an earlier filing date than Gilder '777, which suggests that the inventors of the Gilder '404 publication were aware of the blade support member of Gilder '777 and intentionally chose a different design because of the importance of having the blade support members confined within the width of the blades.

In view of the above, Appellants submit that *prima facie* obviousness has not been established. As discussed in the MPEP, “[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” (See MPEP 2143.02(VI) (citing *In re Ratti*, 270 F.2d 810 (CCPA 1959)).

There is also no disclosure in Gilder ‘404 of a “blade length (LB) [of] less than 1 mm.” The Office Action mailed 1/18/2007 concedes that Gilder ‘404 “is silent about the blade width or length.” (Office Action mailed 1/18/2007, page 4). In an attempt to construct an obviousness type rejection, using hindsight, the Examiner relies on the disclosure of Gooding.

As shown in Figs. 1, 2, and 3 of Gooding, reproduced below, Gooding also discloses a shaving unit.



Gooding discloses an “open framework” with “supporting surface within the boundaries of said framework to which intermediate portions of said razor [sic] blade are attached leaving substantial lengths of said razor [sic] blade clear of said framework to permit the unimpeded passage of cut hairs and shaving soap past the cutting edge.” (Gooding, col. 1, lines 15-26). Thus, as can be seen in Fig. 1, supporting surfaces 11c are not along the entire length of each razor. Gooding further discloses that the width of the blades “is narrow, being for example

within the range of 0.8 to 2.0 millimeters, preferably 1.25 millimeters with a thickness of 0.1 of a millimeter.” (Gooding, col. 2, lines 9-15).

The Office Action mailed 1/18/2007 asserts that based upon this disclosure of Gooding, that “it would have been obvious to one skilled in the art at the time this invention was made to further modify Gilder et al. ‘404 by having the blade’s width in the range of less than 1 mm depending upon the number of blades that is to be accommodated in a given width of the shaving unit.” Appellants disagrees. Although it may be advantageous to use narrow width blades in the Gooding open framework design, an artisan having ordinary skill in the art would not have made the asserted combination because the advantages discussed by Gooding would not apply to the very different razor cartridge disclosed in Gilder ‘404.

The Office Action asserts that one having ordinary skill would have found it obvious to “hav[e] blade’s width in the range of less than 1 mm depending upon the number of blades that is to be accommodated in a given width of the shaving unit.” However, Gilder ‘404 already discloses a specific inter-blade spacing of the respective blades of 1.10 mm. (See Gilder ‘404, page 3, paragraph 0013). Given the specific spacing of the respective blades -- a spacing specifically relied upon by the Examiner in making the instant rejection -- having blades of a narrower width would do nothing to accommodate more razor blades in a given width of the shaving unit.

The Office Action also implies that having a narrower width might facilitate the passage of cut hair and shaving soap through the shaving unit.¹ Although having razor blades with narrower widths might allow for more passage of hair through the Gilder ‘404 structure if used with the supporting bars (28) of Gilder ‘404, narrower razor blades used with the blade supporting structures disclosed by Gilder ‘777 (the modification proposed by the Examiner) would not result in additional movement of hair through the safety razor blade unit because the back parts of the Gilder ‘777 blade support members are not confined within the width of the blades. Using a narrower blade with the blade support member of Gilder ‘777 would also result in more difficulty in securing the blade to the blade support structure.

¹ The Examiner does not use this motivation in making the rejection, but does cite this as an advantage of having razor blades of narrower widths.

Furthermore, given the designs of Gilder '404 and Gilder '777, using a blade of narrower width would also not be expected to allow for "a greater blade tangent length [of for a] greater angle of blade inclination" as these features are also controlled by the support bars or blade support members of Gilder '404 and Gilder '777. Nor has the Examiner suggested a reason that an artisan having ordinary skill in the art at the time of invention would want to alter the blade tangent length or the blade inclination.

Gilder '404 also does not disclose "a group of at least five parallel blades," as recited by claim 1. Gilder '404 only discloses safety razor blades having groups of three or four blades. Gilder '777 and Gooding also do not disclose "a group of at least five parallel blades." Instead of pointing to any suggestion in Gilder '404, Gilder '777, or Gooding to add an additional blade to the structure of Gilder '404, the Office Action mailed 1/18/2007 alleges that one would add an extra blade to the four-blade shaving unit of Gilder '404 "for the purpose of adding an additional cutting surface to reduce overall shaving time." This asserted motivation, however, does not address the drawbacks of adding additional blades, namely the increased drag and associated discomfort." (See e.g., Gilder '404, page 1, paragraph 0002). An artisan having ordinary skill in the art would recognize that "[c]hanging features to enhance one characteristic often have a counter-productive effect on other characteristics and in deciding upon a blade unit design for manufacture and marketing a compromise must always be reached as to the characteristics which the blade unit produced is to have." (Gilder '404, page 1, paragraph 0002). In the present case there is nothing whatsoever in the art of record that would have led the artisan to believe that the Gilder '404 razor required further optimization in any respect. An artisan having ordinary skill in the art would have recognized that modifying the number of blades would likely have corresponding counter-productive effects on other characteristics and thus be reluctant to modify the safety razor blade design of Gilder '404. Because the Office Action mailed 1/18/2007 does not advance a teaching, suggestion, or motivation to add an additional blade to the four blade cartridge of Gilder '404, the Examiner has failed to present a *prima facie* case of obviousness.

There is also no disclosure in Gilder '404 of a "distance from the cutting edge of a first blade of said group to a last blade of said group being between 3.8 mm and 4.6 mm." As discussed above, Gilder '404 only discloses groups of three and four blades. Gilder '404 also explicitly discloses a maximum average inter-blade span of 1.25 mm. (See e.g., Gilder '404,

abstract). Even if the four blade razor of Gilder '404 had the maximum spacing between blades of 1.25 mm, that would only result in a distance from the cutting edge of the first blade of the group to the last blade of the group of 3.75 mm. The Examiner asserts that if one were to add an additional blade and use the preferred spacing of 1.10 mm between each blade, that this would result in a distance of 4.40 mm, but, as discussed above, the Office Action mailed 1/18/2007 has not even advanced a sufficient teaching, suggestion, or motivation to add an additional blade to the four-blade safety razor unit of Gilder '404. (See Office Action mailed 1/18/2007, page 3).

As discussed above, the Office Action mailed 1/18/2007 fails to present a *prima facie* case of obviousness for not only one, but for at least four different features of claim 1. The wholesale modification of the Gilder '404 safety razor blade unit required to supply all of these missing claim features strongly indicate the use of impermissible hindsight. This is especially true given the fact that Gilder '404 teaches away from the use of the blade support structure disclosed by Gilder '777 and that Gooding discloses blades for use with a different type of razor blade holding structure.

An artisan having ordinary skill in the art at the time of invention would not have combined the disclosures of Gilder '404, Gilder '777, and Gooding in the manner described in the Office Action mailed 1/18/2007 because doing so would not result in any foreseeable improvements and would require the wholesale redesign of the safety razor blade unit of Gilder '404. A "suggested combination of references [that] require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate" does not establish a *prima facie* case of obviousness. (*In re Ratti*, 270 F.2d at 813, see also MPEP 2143.02(VI)).

The rejection of claim 1 is therefore improper and must be withdrawn. Accordingly, Appellants submit that claim 1 is in condition for allowance.

Independent Claim 11

Independent claim 11 also recites a number of elements that Gilder '404 fails to disclose, including the "support members (400) . . . having . . . a depending base portion (402) angled relative to [a] blade platform portion (406)," the "blade length (LB) [of] less than 1 mm," and the "group of at least five parallel blades." Each of these features has been discussed above in regard to independent claim 1. As discussed above, the combination of Gilder '404 with the secondary references of Gilder '777 and Gooding fails to present a *prime facie* case of obviousness absent the use of improper hindsight.

With regard to claim 11, Appellants reiterate that the replacement of the supporting bars (28) of Gilder '404 with the razor support members of Gilder '777 would violate the direct command of Gilder '404 that support bars (28) be "*confined within the width of the blades*, this being an important contribution to achieving a wash through index value of at least 0.20 *in accordance with the essential teaching of the present invention.*" (Gilder '404, page 3, paragraph 0025 (emphasis added)). Appellants also note that use of the narrower razor blades of Gooding would also not result in the same advantages when used with the razor blade units of Gilder '404 or Gilder '777 as opposed to the open framework design disclosed in Gooding, which is also discussed above. Furthermore, the Office Action does not advance a sufficient teaching, suggestion, or motivation to have a group of five blades as required by the claims. As such, an artisan having ordinary skill in the art at the time of invention would not have been motivated to combine the disclosures of Gilder '404, Gilder '777, and Gooding as asserted in the Office Action mailed 1/18/2007, because such a combination would undermine the "essential teachings" of Gilder '404 and result in a wholesale reconstruction of the safety razor blade unity disclosed by Gilder '404.

Because the Office Action mailed 1/18/2007 fails to present a *prima facie* case of obviousness, the rejection of claim 11 must be withdrawn. Accordingly, Appellants submit that claim 11 is in condition for allowance.

Dependent Claims 2 and 3

Claims 2 and 3 depend from independent claim 1 and are therefore allowable for at least the same reasons discussed above in relation to claim 1.

Moreover, with specific regard to dependent claims 2 and 3, Gilder '404 also does not disclose a distance between the first and last blade of "between 4.0 mm and 4.4 mm," as required by claim 2, or of "between 4.1 mm and 4.3 mm," as required by claim 3. As discussed above, Gilder '404 only discloses a maximum distance from the cutting edge of the first blade of the group of four blades to the last blade of the group of 3.75 mm. Furthermore, the Examiner's assertion that adding a fifth blade would result in a distance of 4.40 mm fails to address the range recited in claim 3, namely having a distance of "between 4.1 mm and 4.3 mm."

Regarding claims 2 and 3, the Office Action mailed 1/18/2007 asserts that "it is well known in the art that the length of the inter-blade span . . . affect the overall size and the rinsing efficiency of the blade unit. Therefore, it would have been obvious to one skilled in the art to further modify Gilder et al. '404 by selecting a desirable range for the blades distance . . . to be accommodated in a given size of the blade unit and yet not to jeopardize the rinsing efficiency thereof." (Office Action mailed 1/18/2007, page 4) The Examiner's reasoning does not call for a simple modification of Gilder '404, however, but rather requires a wholesale redesign of the Gilder '404 safety razor blade unit. It also requires a change of the specific spacing between adjacent blades specifically called for by Gilder '404. The Examiner apparently ignores the warning in Gilder '404, that "[c]hanging features to enhance one characteristic often have a counter-productive effect on other characteristics." (Gilder '404, page 1, paragraph 0002). As noted above, it is well established that a "suggested combination of references [that] require[s] a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate" does not establish a *prima facie* case of obviousness. (*In re Ratti*, 270 F.2d at 813, see also MPEP 2143.02(VI)).

Because the Office Action mailed 1/18/2007 failed to present a *prima facie* case of obviousness, the rejections of claims 2 and 3 must be withdrawn. Accordingly, Appellants submit that claims 2 and 3 are in condition for allowance.

Dependent claim 4, 5, 7, and 8

Claims 4, 5, 7, and 8 depend from claim 1 and are therefore allowable for at least the same reasons discussed above in relation to claim 1.

Dependent claims 12-15

Claims 12-15 each depend from either claim 1 or claim 11 and are therefore allowable for at least the same reasons discussed above in relation to claims 1 and 11.

Furthermore, claims 12-15 each require a blade length of "less than 0.9 mm" or of "about 0.85 mm." Gilder '404 contains no disclosure of a blade length of less than 0.9 mm or of about 0.85 mm. Although Gooding discloses blade lengths "within the range of 0.8 to 2.0 millimeters, preferably 1.25 millimeters," (See Gooding, col. 2, lines 9-14), the artisan would not have modified the Gilder '404 razor cartridge to utilize such blade lengths for the reasons discussed above.

Dependent claims 16 and 17

Claims 16 and 17 depend from claims 1 and 11 respectfully and are therefore allowable for at least the same reasons discussed above in relation to claims 1 and 11.

Furthermore, claims 16 and 17 further recite "wherein said depending base portion (402) extends rearward of a blade end (450)." As discussed above, Gilder '404 does not disclose a "depending base portion," and the combination of Gilder '404 with Gilder '777 is improper. Gilder '404 specifically discloses that the support bars (28) are "*confined within the width of the blades*, this being an important contribution to achieving a wash through index value of at least 0.20 *in accordance with the essential teaching of the present invention.*" (Gilder '404, page 3, paragraph 0025 (emphasis added)). The replacement of the supporting bars (28) of Gilder '404 with the razor support members of Gilder '777 would violate this "essential teaching" of Gilder '404 because the razor support member of Gilder '777 is not confined within the width of the blades. An artisan having ordinary skill in the art at the time of invention would not have replaced the supporting bars (28) of Gilder '404 with the razor support members of Gilder '777 because Gilder '404 specifically teaches away from the use of razor support members that are not confined within the width of the blades.

Dependent claims 18-20

Claims 18-20 depend from claims 1 or 11 and are therefore allowable for at least the same reasons discussed above in relation to claims 1 and 11.

Claims 18-20 further address the thickness of each support member. The Examiner does not address a teaching, suggestion, or motivation to have a support member of the claimed thickness, but rather merely asserts that the “thickness of the blade support member affect the overall size and the rinsing efficiency of the blade unit. Therefore, it would have been obvious to one skilled in the art to further modify Gilder et al. ‘404 by selecting . . . a desirable thickness for the blade support member to be accommodated in a given size of the blade unit and yet not jeopardize the rinsing efficiency thereof.” (Office Action mailed 1/18/2007, page 4). This rejection is improper not only because the combination of Gilder ‘404 and Gilder ‘777 is improper, as discussed above, but also because the Examiner is attempting to further modify the razor support members of Gilder ‘777. There is simply no suggestion in the art of record that would have led the artisan to not only replace the support bars (28) of Gilder ‘404 with the razor support member of Gilder ‘777 but then to also re-modify the razor support member of Gilder ‘777 to arrive at the instantly claimed device.

Furthermore, there is nothing in the art to suggest that the thickness of the Gilder ‘777 razor support member would “affect the overall size and the rinsing efficiency of the blade unit.” Gilder ‘404 already specifies an inter-blade span of 1.10 mm and the blade support members of Gilder ‘777 are curved in such a way that it seems unlikely that variations in the thickness of the blade support member would drastically affect the rinsing efficiency of the blade unit.

Again, the Examiner is calling for a wholesale reconstruction of the Gilder ‘404 safety razor blade unit. A “suggested combination of references [that] require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate” does not render a *prima facie* case of obviousness. (*In re Ratti*, 270 F.2d at 813, see also MPEP 2143.02(VI)).

Because the Office Action mailed 1/18/2007 failed to present a *prima facie* case of obviousness, the rejections of claims 18-20 must be withdrawn. Accordingly, Appellants submit that claims 18-20 are in condition for allowance.

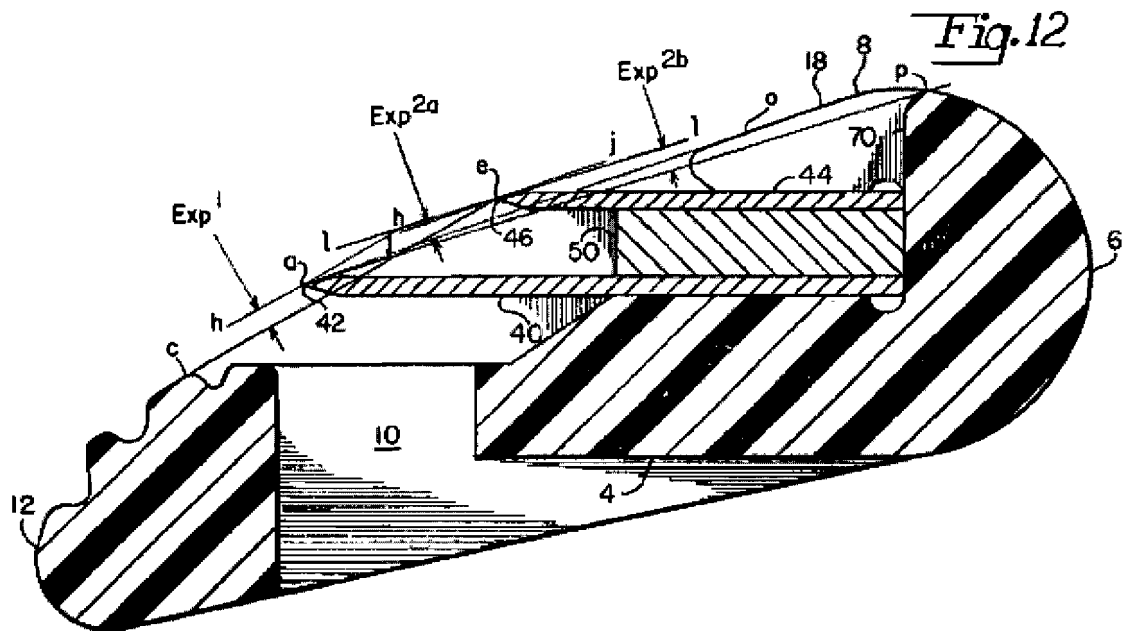
B. The rejection of claim 6 under 35 U.S.C. §103(a) over Gilder '404 in view of Gilder '777" and Gooding in further view of Trotta is improper.

Claim 6 depends from claim 1 and is therefore allowable for at least the same reasons discussed above in relation to claim 1.

Furthermore, claim 6 recites that "said blades have a blade tangent angle between 21° and 22°." The Office Action mailed 1/18/2007 concedes that Gilder '404 "is silent about the range for the blade tangent angle," but asserts that "[i]t would have been obvious in the art to further modify Gilder et al. '404 by having the blades at a tangent angle of between 21 and 22 degrees to achieve a closer and safer shave as taught by Trotta." (Office Action mailed 1/18/2007, page 5).

This argument is a mischaracterization of the Trotta reference. Trotta does not disclose the very specific claimed range of a blade tangent angle between 21 to 22 degrees, but instead only discloses a broader blade tangent angle range of between 20 and 32 degrees. (Trotta, abstract).

The Gilder '404 safety razor blade unit has a substantially different arrangement than the shaving implement disclosed by Trotta. As shown in Fig. 12 of Trotta, reproduced below, the Trotta shaving implement only has two blades and uses a substantially different method of supporting those blades within the shaving implement.



Given the vast differences between the Trotta shaving implement and the Gilder '404 safety razor blade unit, including the different number of blades and the method upon which the blades are supported, an artisan having ordinary skill in the art would have been reluctant to turn to Trotta in order to find a way to improve the closeness and safeness of the shave provided by the Gilder '404 blade unit. As discussed above, Gilder '404 specifically cautions that “[c]hanging features to enhance one characteristic often have a counter-productive effect on other characteristics,” and thus an artisan having ordinary skill in the art would believe that altering the blade tangent angle of the blades of Gilder '404 might result in counter-productive effects.

Furthermore, the use of four references to piece together the claim elements of Appellants' claim 6, requiring wholesale reconstruction of the Gilder '404 safety razor blade unit, strongly indicates the use of improper hindsight. Again, a “suggested combination of references [that] require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate” does not establish a *prima facie* case of obviousness. (*In re Ratti*, 270 F.2d at 813, see also MPEP 2143.02(VI)).

Because the Office Action mailed 1/18/2007 failed to present a *prima facie* case of obviousness, the rejections of claim 6 must be withdrawn. Accordingly, Appellants submit that claim 6 is in condition for allowance.

Conclusion

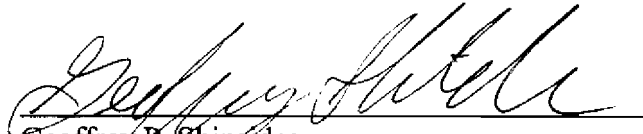
Please apply the Brief Fee of \$500 and any other charges or credits to Deposit Account No. 06-1050.

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Respectfully submitted,

Date: 6/13/2007



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Claims Appendix

1. A shaving razor blade unit comprising

a housing, and

a group of at least five parallel blades supported by said housing, the distance from the cutting edge of a first blade of said group to a last blade of said group being between 3.8 mm and 4.6 mm,

wherein the blades (28) are each mounted on respective support members (400) that are each movably mounted on said housing, each of said support members (400) having a blade platform portion (406) for supporting the respective blade (28) and a depending base portion (402) angled relative to the blade platform portion (406),

said depending base portions (402) being arranged generally perpendicular to an imaginary shaving surface approximately intersecting the blade cutting edges (408), and wherein

the blades (28) have a blade length (LB) extending rearward from the cutting edge (408), said blade length (LB) being less than 1 mm.
2. The blade unit of claim 1 wherein said distance is between 4.0 mm and 4.4 mm.
3. The blade unit of claim 1 wherein said distance is between 4.1 mm and 4.3 mm.
4. The blade unit of claim 1 wherein the span between cutting edges is between 0.95 mm and 1.1 mm.

5. The blade unit of claim 1 wherein the exposure of blades between said first blade and said last blade is approximately 0.0.
6. The blade unit of claim 1 wherein said blades have a blade tangent angle between 21° and 22°.
7. The blade unit of claim 1 wherein said first blade has a negative exposure.
8. The blade unit of claim 1 wherein said last blade has a positive exposure.
11. A shaving razor blade unit comprising
 - a housing, and
 - a group of at least five parallel blades supported by said housing, said blades having an average interblade span between 0.95 mm and 1.15mm,
 - wherein the blades (28) are each mounted on respective support members (400) that are each movably mounted on said housing, each of said support members (400) having a blade platform portion (406) for supporting the respective blade (28) and a depending base portion (402) angled relative to the blade platform portion (406),
 - said depending base portions (402) being arranged generally perpendicular to an imaginary shaving surface approximately intersecting the blade cutting edges (408), and
 - wherein

the blades (28) have a blade length (LB) extending rearward from the cutting edge (408), said blade length (LB) being less than 1 mm.

12. The blade unit of claim 1 wherein said blade length is less than 0.9 mm.
13. The blade unit of claim 12 wherein said blade length is about 0.85 mm.
14. The blade unit of claim 11 wherein said blade length is less than 0.9 mm.
15. The blade unit of claim 14 wherein said blade length is about 0.85 mm.
16. The blade unit of claim 1 wherein said depending base portion (402) extends rearward of a blade end (450).
17. The blade unit of claim 11 wherein said depending base portion (402) extends rearward of a blade end (450).
18. The blade unit of claim 1 or 11 wherein the thickness (T) of each said support member (400) is between 0.004 inch (0.10 mm) and 0.009 inch (0.23 mm).
19. The blade unit of claim 18 wherein the thickness (T) is between 0.005 inch (0.13 mm) and 0.007 inch (0.18 mm).

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20. The blade unit of claim 19 wherein the thickness (T) is about 0.006 inch (0.15 mm).

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Evidence Appendix

None.

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Related Proceedings Appendix

None.